

Amendment and Response

Applicant: Peter J. Fritz

Serial No.: 10/081,794

Filed: February 21, 2002

Docket No.: M120.169.103 (54666US006)

Title: METHOD FOR ATTACHING A FASTENER TO A SURFACE TREATING MEMBER, AND SUCH AN ARTICLE HAVING A FASTENER

REMARKS

The following remarks are made in response to the Non-Final Office Action mailed September 22, 2005. The Office Action rejects claims 31, 32, 35-40, 45-48, and 52-54 under 35 U.S.C. § 103(a) as being unpatentable over Johnson et al., U.S. Patent No. 3,562,968 (“Johnson”) in view of Hutter, III, U.S. Patent No. 4,842,912 (“Hutter”) and Gugle et al., U.S. Patent No. 4,636,124 (“Gugle”).

With this Response, claim 48 has been amended and newly presented claim 56 added. Claims 31-56 are presented for consideration and allowance.

Support for New Claim 56

Support for new claim 56 is found throughout the Specification, for example at pg. 10, ll. 1-19.

Election Requirement

Claims 33, 34, 49-51, and 55 have been designated as withdrawn in accordance with the Species Election Requirement mailed July 27, 2005, made final in the presently-addressed Office Action. Please note claims 41 and 42 were previously designated as withdrawn in association with a previous Species Election Requirement made final in a previously-addressed Office Action mailed August 25, 2004.

35 U.S.C. § 103 Rejections

Independent claims 31 and 52 stand rejected under 35 U.S.C. § 103 as unpatentable over Johnson in view of Hutter and Gugle. Independent claim 31 relates, in part, to a method for attaching a fastener to a surface conditioning member. Relative rotation is induced between the fastener and the surface conditioning member with a layer of thermoplastic adhesive in contact with a planar surface of the fastener and the surface conditioning member so as to soften the layer of adhesive to form a bond between the fastener and the surface conditioning member. For at least the reasons described below, the cited references fail to teach or suggest such limitations.

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As noted in the Office Action, Johnson does not disclose inducing relative rotation between a fastener and a surface conditioning member with a layer of thermoplastic adhesive in contact with a planar surface of the fastener and the surface conditioning member as required by the limitations of independent claim 31. *NFOA 9-22-05* at pg. 3. The Office Action relies upon Hutter for such limitations, and in particular Figure 25 and column 10, line 19 to column 11, line 13 of Hutter.

It is believed that with additional reference to those portions of Hutter, it can be clarified that Hutter, in fact, fails to teach or suggest such limitations. In particular, and with reference to column 10, line 48 to column 11, line 13, Hutter describes an installation tool 26 and various implicitly, pre-softened bonding agents that are cured by mixing two components or are air-cured. In particular, rotation of the installation tool 26 is used to mix discrete, liquid beads 116, 118 of bonding agents to initiate curing and/or to break encapsulated liquid beads 114 of bonding agent to initiate air curing. Thus, the teachings of Hutter relative to the embodiment of FIG. 26 is not using such rotation to soften a layer of adhesive to form a bond. Hutter expressly indicates that “as viewed in FIG. 25, the installation tool 26 may be provided with rotational means The attachment is rotated through a sufficient angular displacement to rupture and/or intermix the bonding agent to initiate activation of bonding agent curing.” *Hutter* at col. 11, ll. 6-13.

Notably, relative to embodiments of Hutter employing a thermoset adhesive, Hutter decidedly employs a non-rotation attachment method. Hutter instead teaches that a heating element should be used to melt a thermoset adhesive material. *Hutter* at col. 10, ll. 21-26. A reasonable read of Hutter teaches that “in this case” (i.e., where softening is required), the heating element should be used, and later teaches where a pre-softened bonding agent is present, rotary or vibratory means should be employed. *See Hutter* at col. 10, l. 23-25. In other words, one having ordinary skill in the art would read Hutter as teaching that where adhesive is to be melted, a heating element is to be used, but where a liquid bonding agent is present, rotation or vibration is appropriate. *See Hutter* at col. 10, ll. 20-29 and col. 10, l. 63 – col. 11, l. 13. In view of such clarifications, Hutter, in fact, teaches away from using rotation to soften any adhesive layer as set forth in claim 1.

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Gugle is also unavailing, and does not teach or suggest rotation between a faster and surface conditioning member so as to soften the layer of adhesive. For this reason, claim 31 is allowable over the cited references.

In addition, the Office Action combines Gugle with Johnson citing the motivation that thermoplastic adhesive is “taught to be desirable by Gugle.” *OA* at pg. 4. However, Gugle relates to increasing adhesion on wood and painted surfaces. *Gugle* at col. 1, ll. 6-9. Johnson does not relate to wood or painted surfaces, but instead relates to a drive button 40 adhered to an abrasive disc 30. *Johnson* at abstract. The fact that Gugle teaches thermoplastic adhesive is desirable in one application does not translate to all applications. As such a proper motivation for combining the cited references has not been provided, and a *prima facie* case of obvious has not been established.

In view of at least the clarifications provided above, it is believed that the cited references fail to teach or suggest the limitations of independent claim 31. Claim 52 incorporates limitations substantially similar to those previously addressed in association with independent claim 31. As such, claim 52 is similarly believed patentably distinct from the cited references. Additionally, claims 32-51 and 53-56 depend, in some form, from independent claim 31. As such, they are also believed to be in an allowable form. In sum, it is respectfully requested that the Examiner withdraw the rejection of those claims, with allowance and notice to that effect.

While it is believed the clarifying remarks presented above sufficiently distinguish the claims from the cited references, the claims depending from independent claim 31 are also distinguishable from the cited references for at least the additional reasons presented below.

For example, in rejecting claims 46 and 47, the Office Action indicates the exact “relative rotation” and “the exact compressive force would have been obvious to one having ordinary skill in the art at the time the invention was made since such would depend upon numerous factors, i.e., the exact material of the adhesive and/or the fastener, the shape of the adhesive, etc.” *OA* at pg. 5. It is agreed that the values encompassed by those claims depend upon numerous factors. However, it is respectfully submitted that the fact those limitations depend upon many factors does not render claims 46 and 47 obvious, but in fact is evidence that they are non-obvious. In

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other words, the number and variety of factors required to arrive at the values presented in those claims show that it would not be mere routine, or otherwise obvious to select such values. As there has been no citation to teachings in the prior art or any expressed motivation to arrive at such limitations in the prior art, it is believed a *prima facie* case of obviousness for claims 46 and 47 has not been established for at least such additional reasons.

As another example, claim 48 relates to a method for attaching a fastener to a surface conditioning member where inducing relative rotation between a fastener and a surface conditioning member causes a planar surface of the fastener to soften and bond with the surface conditioning member. Following a good faith review, it is believed that the Office Action has not addressed such limitations. Furthermore, the cited references fail to teach or suggest such limitations. In particular, and once again following a good faith review, it is believed that none of the cited references teach or suggest the combination of softening adhesive as well as softening a planar surface of a fastener. As such, claim 48 is believed allowable for at least such additional reasons.

Newly presented claim 56 relates to a method for attaching a fastener to a surface conditioning member where the planar surface of the fastener defines an outer portion and a central portion and further wherein the fastener is bonded more firmly at the outer portion than at the central portion. None of the cited references teach or suggest such limitations. Gugle expresses a concern that the adhesive be uniformly disturbed across the friction weld surface (e.g., col. 2, ll. 36-42) and Hutter discloses air or intermixing activation of bonding agent curing (e.g., col. 11, ll. 6-13), but neither address a fastener bonded more firmly at the outer portion than at the central portion, expressly or inherently.

CONCLUSION

In view of the above, Applicant respectfully submits that claims 31-56 are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 31-56 are respectfully requested.

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No fees are required under 37 C.F.R. 1.16(b)(c). However, if such fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 50-0471.

The Examiner is invited to contact the Applicant's representative at the below-listed telephone numbers to facilitate prosecution of this application.

Any inquiry regarding this Amendment and Response should be directed to Timothy A. Czaja at Telephone No. (612) 573-2004, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

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Respectfully submitted,

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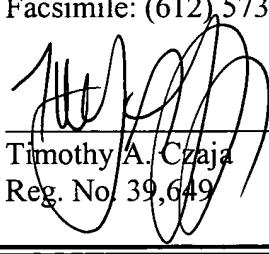
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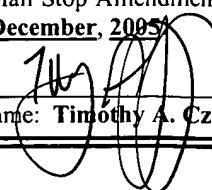
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CERTIFICATE UNDER 37 C.F.R. 1.8:

The undersigned hereby certifies that this paper or papers, as described herein, are being deposited in the United States Postal Service, as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 15th day of December, 2005.

By: 

Name: Timothy A. Czaja